USAF photo by SrA. Matthew Hannen

Air Mobility Command has been the glue holding the Afghanistan operation together.

Tankers and Lifters for a Distant War

By Richard J. Newman

On Sept. 11, the day of the terrorist attacks, Air Mobility Command's active duty fleet of more than 378 long-range airlifters and tankers included 94 aircraft sitting on ramps awaiting repairs. USAF maintenance crews jumped to the task and, within two days, rushed 55 of them back into service. Already, they were sorely needed.

For most of the world, the war began Oct. 7, the day the first bombs fell on Afghanistan. However, logisticians, airlifter and tanker crews, loadmasters, civil engineers, and thousands of other personnel supporting Operation Enduring Freedom went into action weeks before the headlines announced war.

They deployed in greater numbers than special operations forces, which got more public attention. They bedded down in inhospitable conditions on bases US troops had never visited. Some mobility units rotated from one rugged site to another, and did so enthusiastically.

"They live to do one of these bare-based operations," reported Air Force Maj. Gen. Michael W. Wooley, the commander of AMC's Tanker Airlift Control Center, Scott AFB, Ill. "Guys are fighting over [the chance of] being in the forward [units]."

In the early weeks, at least, the war was a much bigger challenge for support units that form the military "tail" than it was for the combat units that constitute the "tooth." Through the first month of the war, US combat aircraft flew about one-sixth as many strike sorties per day as they did in Operation Allied Force, the 1999 air war over Kosovo. But because of Afghanistan's remote location—at least 400 miles from aircraft carriers in the Arabian Sea and much farther from land bases used by Air Force air crews—the need for tanker and airlift support units came out about the same.

A Major Theater War

The early Afghan air campaign rarely delivered 100 strike sorties in a day. However, the effort tied up roughly 70 percent of the Air Force's active duty tanker fleet.

"We called Kosovo an MTW [Major Theater War] for tankers," said Gen. Charles T. Robertson Jr., the then–AMC commander who also served as commander in chief of US Transportation Command. "This is probably of that magnitude."

In the immediate aftermath of Sept. 11, military commanders sensed that logistic support for the military response would take a major war's worth of effort.

Secretary of Defense Donald Rums-

USAF photo by SSgt. Pamela J. Farlin

Here, a KC-135 tanker gets a tow into place at Moron AB, Spain. At left, C-17 airlifters sit on a ramp at a forward location, awaiting their next missions in Operation Enduring Freedom.

feld and Army Gen. Henry H. Shelton, then the Chairman of the Joint Chiefs of Staff, inquired of Robertson whether the Pentagon should activate the Civil Reserve Air Fleet, or CRAF. Such a move would have allowed DOD to call up designated commercial jetliners to help ferry troops and cargo to the theater of operations, a step considered necessary in a major war to augment the military airlift fleet.

Air travel was largely shut down at the time, and the airlines were more than willing, but the mobility forces were able to meet US needs by hiring all the airliners it needed, without invoking CRAF.

Within days of the Sept. 11 attacks, the Air Force started laying down an "air bridge" for an operation whose nature had yet to come into focus. With no warning prior to Sept. 11 and with the possibility of US military retaliation imminent, the goal was to build up the capability for operations near Afghanistan as rapidly as possible. Commanders did not anticipate having the luxury of a six-month buildup period like that before the Persian Gulf War in 1991 or even the shorter buildup prior to the Kosovo war.

"The difference between this war and the Gulf War is the speed of the response required," said Robertson, who retired in November.

AMC and TRANSCOM officials organized several Tanker Airlift Control Elements, or TALCEs, that included command-and-control experts, civil engineers, cargo handlers, and other specialists. They began packing up industrial equipment such as the K loaders used to rapidly load huge cargo jets.

From the United States, C-5 airlifters and advanced, newly procured C-17 transports began heading both east and west, to maximize throughput. TALCEs gathered first at intermediate staging areas such as bases in Germany, Guam, and South Korea. In some instances, teams were prepared to fly to facilities in the region before host countries had given permission to use their bases or their airspace. "We were ahead of the diplomatic process," said Robertson.

Eventually, the US military dispatched between 20 and 25 TALCEs to bases in Central Asia, the Gulf region, Uzbekistan, and Pakistan, plus other undisclosed locations. The typical team included about 45 airmen but some exceeded 100. At some bases—for example, some in the Gulf region—the TALCEs fell in on well-established infrastructure and faced the relatively simple challenge of setting up fueling stations for tankers and airlifters, cargo-handling operations, and command-and-control cells.

"Abysmal" Sites

At other sites, however, the TALCEs encountered primitive conditions. "A couple of locations are absolutely abysmal," noted Robertson. "We're operating in places that don't have facilities that meet Western standards."

Robertson wouldn't identify particular bases, but other military men made special mention of an airfield in Uzbekistan at which the US based search and rescue crews and perhaps special operations forces. It had poor sanitation and no potable water at the outset. And US troops reportedly found similar conditions at two Pakistan bases from which they operated.

As the TALCEs began setting up operations at various airfields, C-5s and C-17s began flying in the equipment needed to house troops, maintain aircraft, and sustain military operations. While most public attention focused on the possible deployments of combat aircrews, ground troops, and special operations forces to the theater, the airlift community was heavily engaged. Three weeks into the war, nearly the entire active duty C-5 and C-17 fleets—some 140 aircraft total—had been dedicated to supplying the war effort.

Air mobility planners reorganized many regular missions, such as supply flights to US embassies, to use the cargo aircraft more efficiently. C-5s were dedicated solely to the war effort because of their huge capacity and C-17s because of their ability to land on unimproved runways. Smaller C-130s and C-141s, and commercial aircraft, took over many of the regular missions of the two cargo workhorses.

TRANSCOM also contracted for more than 100 commercial flights during the first month of the war. During the 1999 Kosovo war, by contrast, mobility officials called upon commercial carriers for just 66 flights during the entire 78-day conflict.

The sudden strain on the airlift system produced problems that mobility officials have learned to expect. The C-5, for instance, represents half of the nation's airlift capability and carries half of the military's oversize cargo, but it is also one of the oldest airframes in the military, dating to 1970. And it clogged the system with breakdowns at several points.

Since the C-5's reliability record has grown increasingly spotty, mobility planners anticipated problems and organized its flights accordingly.

USAF photo by SSgt. Ken Bergmann

An Air Force C-5 is unloaded at NAS Sigonella, Italy. Airlift and tanker support for Enduring Freedom began before Oct. 7, as mobility forces established an air bridge for troops and supplies and set up bare bases.

"We were very cautious where we flew the C-5s," said Robertson.

They only flew to larger bases with plenty of room to move aside in event of a breakdown. As another precautionary measure, the giant aircraft's engines were rarely shut down except for scheduled oil changes; once one landed at a base, it would sit on the ramp just long enough to unload and then take off again.

Smaller or more rugged airfields, where there was little room or infrastructure for servicing of aircraft, were frequented primarily by the much newer and far more reliable C-17.

USAF photo by TSgt. Efrain Gonzalez

Out of Luck

For about a week, the gentle handling of the C-5 paid off. Then the luck ran out. In a four-day period in late September, 20 percent of the C-5s supporting the build up for Enduring Freedom broke down. At one location—TRANSCOM won't identify specific bases—planners had estimated they needed room for up to eight C-5s on the ground at any one time. During the worst of the breakdowns, there were 22 C-5s on the ground, most down for repairs. The problems forced mobility officials to devote precious cargo space to engines and other replacement parts for the C-5.

"The C-5 is a challenge," said Brig. Gen. Peter J. Hennessey, AMC's director of logistics. "It can do things no other airplane can do, but reliability is still a problem."

Such a problem, in fact, that the Pentagon's Quadrennial Defense Review, released Sept. 30, highlighted a shortfall of strategic airlift as a particular weakness. The QDR singled out the C-5 for its low mission capable rates.

The new requirement for strategic airlift is to be able to deliver 54.5 Million Ton Miles of cargo per Day, but DOD can only transport about 45 MTM/D at present. The C-5's poor reliability is one of the primary limitations; planners routinely program two aircraft per mission in case one poops out.

USAF photo by TSgt. Scott Reed

"Fighting over [the chance of] being in the forward [units]." At top, 821st TALCE members from McGuire AFB, N.J., unload equipment from a C-17 at a forward location. Here, members of the 615th TALCE from Travis AFB, Calif., off-load pallets from another C-17 at a forward location.

A mere shortage of aircraft hurts, too. The C-17's high reliability makes it extremely valuable, but plans call for USAF to replace 256 retiring C-141s with just 134 C-17s—a net loss of airlift flexibility, according to military officials.

Overall, the Air Force tanker and airlift fleets performed better than in the past. According to Hennessey, mission capable rates for the fleet were higher than averages in the prior year, even though they were flying about 100 more missions each day.

Still, shortfalls highlighted problems that logisticians have been pointing out for years.

"We need more strategic lift and a healthier strategic airlift force," said Robertson.

A program to replace the engines on C-5s should help, but that won't begin until 2007. USAF gets about one additional C-17 per month. Many would like to see the Pentagon embrace a far more aggressive procurement program.

As TALCEs began to establish operational conditions at more than a dozen bases this fall, the airplanes that would provide direct support to the front-line combat jets began arriving. Of these, the most critical were the KC-10 and KC-135 tankers.

In virtually every air campaign, the tankers' ability to refuel warplanes almost indefinitely provides the range needed to reach faraway targets, to loiter while searching for targets, and to fly over the combat zone with a safe supply of fuel. Those needs were magnified during the

USAF photo by SSgt. Shane Cuomo

Critical companions to USAF strike aircraft, such as this B-1B, are the refuelers, like the KC-10 tanker behind it. These aircraft, part of the 28th Air Expeditionary Wing, are taking off for a mission over Afghanistan in November.

early weeks of Enduring Freedom because of the lack of bases close to Afghanistan.

Around the World

US military officials provided few details regarding the number of tanker aircraft involved or their locations, but tankers clearly kept the war on pace from locations all over the world. B-2 bombers flying from Whiteman AFB, Mo., for instance, refueled six times en route to Afghanistan. Such an operation presumably brought in tankers flying from the East Coast of the United States, Europe, and possibly Turkey and other countries.

The biggest concentration of tankers was in several orbits over southwestern Pakistan, just outside Afghan airspace. KC-10s and KC-135s flying from bases in Diego Garcia, in the Indian Ocean, and from Oman, Bahrain, and elsewhere in the Persian Gulf, kept the warplanes tanked up. B-52s and B-1s swooping in from Diego Garcia topped off their tanks before heading into "the box" over Afghanistan to drop their bombs. The massive warplanes have plenty of range for the mission, on paper—but air commanders typically prefer to send jets into a combat zone with full fuel tanks, in case hostile fire or an accident causes a loss of fuel or the need to fly for an extended period.

Fighters flying from two aircraft carriers in the Arabian Sea—which accounted for the bulk of the strike aircraft used in the first month of the operation—relied partly on carrier-based refuelers. But those have a fraction of the capacity of KC-10s and KC-135s, which provided most of the fuel for strike packages. And F-15Es and F-16s that began flying strike missions from Kuwait had to refuel at least twice before they got to Afghanistan.

Combat jets weren't the only airplanes flying into the box. On the same day that B-52s started dropping bombs, C-17s flying out of Ramstein AB, Germany, began dropping a different kind of payload—food.

Beginning on Day 1, the Air Force began running two to four food-drop flights per day. Each C-17 unloaded about 17,000 humanitarian daily rations over northern Afghanistan. The meal packets, packaged much like a US meal-ready-to-eat, burst out of large cartons shortly after leaving the airplane, fluttering down to the ground to be either stockpiled by hungry Afghans—or gathered up by Taliban soldiers and stored as a military foodstuff.

There was no mistaking the fact that the deliveries were being made in a combat zone. Military commanders, who have been increasingly concerned about threats to cargo airplanes, directed the C-17s to fly at altitudes of 25,000 feet or higher. That allowed the jets to fly above the range at which most shoulder-fired surface-to-air missiles could reach. The Taliban has some American–made Stinger anti-aircraft missiles left over from the 1980s, for example. The Pentagon isn't certain how many—or whether they even work—but the threat was considered serious enough to force the airplanes to fly at altitudes where crews risked getting altitude sickness once the cargo door was opened and the fuselage was depressurized. One Pentagon priority is to improve the defensive capabilities of airlifters such as the C-17 by equipping them with flares, chaff, and other countermeasures.

The lopsided reliance upon the "tail" in Enduring Freedom highlighted long-standing concerns about what would happen if war broke out elsewhere, and the United States found itself fighting in two conflicts or more.

There was little slack in the airlift and tanker fleets. Officials knew that if another war erupted, many of the TALCEs and aircrews would have to swing from the first conflict to the second. And with most active duty units deployed for Afghanistan, the Pentagon would have rapidly summoned Air National Guard and Air Force Reserve Command units to fill gaps.

That is how the system is supposed to function during a national emergency. However, many planners believe the support crunch will only get worse. The QDR, for instance, focused on the declining likelihood of conflict in Europe—long the home of the majority of US troops overseas—and on the greater chance that future hot spots will be in Asia, where the distances that need to be covered to get to the theater are far greater.

Key airlift and tanker shortfalls remain unresolved. That could make for some uncomfortable decisions in the future.

"If there was another war," warned Robertson, "there might come a point where I call the CINC and the Chairman and say, 'I'm maxed out—what's your priority?' " ■

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